

May 2016



Veterinary Services Staff

Branch Supervisor/Wildlife Veterinarian: Dr. Mary Wood

Laboratory Supervisor:
Hank Edwards

Senior Lab Scientist:
Hally Killion

Senior Lab Scientist:
Jessica Jennings-Gaines

Brucellosis Lab Assistant:
Kylie Sinclair

Wildlife Disease Specialist:
Terry Creekmore

TWRC Manager:
Matt Huizenga

Wildlife Biologist:
Cole Hansen

Biologist: Sam Lockwood



Wildlife Health Laboratory

The month of April held a few changes for the Wildlife Health Laboratory, primarily with Terry Creekmore's vacancy as he serves his country in the Middle East over the next eight months. In Terry's absence, Kylie Sinclair will do her best to cover those responsibilities by being your point of contact when submitting cases to the Wildlife Health Laboratory. In addition, Mary Wood, Jessica Jennings-Gaines, Hally Killion, and Hank are always available if you should have questions or would like to submit a case. While we will do our best to continue to provide the same diagnostic service, our response time in returning final results may be delayed a few weeks or so. Never hesitate to contact us if you haven't received results in a reasonable time frame.

Kylie Sinclair 307-766-9937/745-5865

Kylie.Sinclair@wyo.gov

Hank Edwards 307-766-9936/745-5865

Jessica Jennings-Gaines or Hally Killion 307-766-9935/745-5865

Dr. Mary Wood 307-745-5180 Ext 230



Kylie Sinclair filling in for Terry Creekmore.



Collecting tonsil swabs on a mountain goat for respiratory disease surveillance.

Respiratory Disease Surveillance in Mountain Goats

Hank was able to get away from the laboratory for a few days to help Gary Fralick and other members of the Jackson Region capture mountain goats for respiratory disease surveillance and movement patterns. Over the course of two days, a billy and a nanny were captured along the Snake River between Hoback Junction and Alpine. The animals were immobilized and sampled for pathogens that are known to cause respiratory disease. In addition several morphologic measurements were taken and the animals were fitted with visibility collars that will be used to track the animal's movements.

Wildlife Necropsy Summary

Disease of the month

In light of the two recent cases of plague in domestic cats in Cody, we thought it would be good to refresh everyone's memory on this disease. Below is the abbreviated version of the plague section from our disease book. Please review and if you have any questions, don't hesitate to call!

Plague is a very serious zoonotic bacterial disease that is found in the western United States and has the notoriety of causing over 200 million human deaths throughout history. This organism is similar to tularemia in that it has a broad host range, but is primarily a flea-transmitted disease of rodents. It is in the rodent population that the disease is able to perpetuate and serve as a reservoir for wildlife and humans.

Agent: *Yersinia pestis* is a bacterium known to be relatively fragile and easily killed by common disinfectants. Plague does not survive well in unprotected environments.

Clinical signs: Infected animals are found dead or nearly so due to the acute nature of this disease. Swollen, draining lymph nodes may be observed, especially around the head (see photo below). Abscesses may be present on the face, gluteal muscles, forelimbs or hind limbs. Infected animals may also be emaciated.

Transmission: The primary mode of transmission is the flea, whereas a single flea bite can transmit ~15,000 *Y. pestis* bacteria into the host's blood stream. Other mechanisms include direct contact with blood or tissue of infected animals, inhalation of aerosols released by hosts with pneumonic plague, and ingestion of contaminated raw meat.

Treatment: Effective antibiotics are available for human and domestic animals, but medical attention must be sought as soon as possible. Treatment of wild populations is not practical.

Public Health Significance: Human cases of plague are uncommon. Symptoms include chills, acute onset of fever, swollen and painful lymph nodes as well as malaise. *Yersinia pestis* infection can also take the forms of septicemic (plague bacteria in the bloodstream) and pneumonic plague. Both of these forms are extremely serious, life-threatening conditions and are characterized by fever, chills, prostration, coughing, and respiratory difficulties. Although plague is a serious human disease, modern antibiotics limit the disease and prevent mortality if medical advice is sought immediately.

The disease is best prevented by only handling plague suspects with proper personal protection (gloves, face mask/respirator, and eye protection). Always handle suspects on the upwind side when possible, and avoid fleas by dusting carcasses with effective insecticides.

If you have questions about plague or think you may be dealing with an animal that may have plague, call the laboratory as soon as possible. As previously stated, it's important that you take the necessary steps to protect yourself by wearing proper personal protection such as gloves, a face mask and safety glasses at a minimum.



Photo of a mountain lion infected with plague; note the extremely enlarged submandibular lymph nodes of the head.

Twenty-one wildlife cases were submitted for diagnostics in April.

| Species | Date Received | County | Diagnosis |
|---------------|---------------|---------|------------------------|
| Mule Deer (3) | 4/1/2016 | Lincoln | Emaciation |
| Mule Deer | 4/1/2016 | Lincoln | Pneumonia |
| Mule Deer (3) | 4/1/2016 | Lincoln | Adenovirus |
| Mule Deer (3) | 4/1/2016 | Lincoln | Rumenitis/Emaciation |
| Mule Deer (7) | 4/8/2016 | Park | Pending |
| Mule Deer (2) | 4/8/2016 | Park | Undetermined |
| Bighorn Sheep | 4/8/2016 | Park | Pending |
| Mountain Lion | 4/12/2016 | Albany | No significant lesions |

Thorne/Williams Wildlife Research Center

Sheep Facility Trial

The most exciting part of the month was a trial run of our new sheep handling facility to trim hooves and take respiratory disease samples from our captive sheep. We weren't sure what to expect as this is a whole new facility design, so we were prepared for anything that might happen. The facility worked incredibly well and we were able to handle our bighorns with minimal stress to the sheep or to the people working them! It turned out pretty great for a couple of guys who were in way over their heads a year ago. We would like to thank all of the department employees who helped lend a hand during the construction of the facility, particularly the Laramie region and Habitat and Access. We also thank Dr. Temple Grandin and Mark Dessing for donating their time to help us develop a fantastic design.



Two ewes can be worked simultaneously in our new facility.



Swinging gates and sliding mats allow us to easily move sedated sheep in and out of the chute. One ewe can be worked while we wait for sedation to take effect on another. Our captive sheep require sedation for hoof care approximately every 4 months to prevent them from becoming overgrown.

Spring Cleaning and High Waters

The beginning of spring has been long anticipated for us here in the canyon with lots of much needed moisture. We have been busy with spring cleaning around the facility and fixing damage from the winter. Spring runoff has started and is keeping us on our toes clearing debris and maintaining fences daily to deal with the high flow on Sybille creek.



Over the last two springs we have seen very high water levels on Sybille creek resulting in a variety of maintenance challenges.



Maintaining our fences along the creek during high water can be very challenging.